## REMARKS

The present application relates to hybrid maize plant and seed X1179J. Claims 1-32 are currently pending in the present application. Applicants respectfully request consideration of the following remarks.

I. Claims

Applicant respectfully submits the addition of new claims 33 through 41. The new claims do not add new matter. Support for the claims can be found in the originally filed specification.

II. Claim Objections

Claims 12, 16, 25, and 29 were objected to. The Examiner states in line 1 of the claims, "A" should be --The--.

Applicants have amended the claims by replacing "A" with --The--, thus alleviating this rejection.

III. Double Patenting

Claims 1-7 and 9-14 were rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of US Patent No. 6,118,052 ('052). The Examiner states that both the instant claims and those of '052 are drawn to hybrid maize plants that have a relative maturity of approximately 117 and are suited to the Southwestern and Western regions of the United States. Any differences between X1179J and 31A12 of '052 are due to minor morphological variations that do not confer patentable distinction. The Examiner concludes that since X1179J and 31A12 of '052 are not patentably distinct, the claimed methods that comprise their use are obviously the same as well. Therefore, a patent issuing from the instant application would then effectively extend the patent term of the claims of '052.

Applicants traverse. Claims 1-32 are patently distinct because they involve a novel maize seed, plants, plant parts, and methods. Applicant's detailed arguments are set forth infra in the Issues under 102/103 section. Applicant further asserts the use of the designation "X1179J" is not arbitrarily assigned. It is common practice within plant breeding that a new and distinct maize seed is designated with a numerical number such as X1179J which defines the claimed

hybrid maize seed which will be deposited under an ATCC accession number. The use of such a designation is a common practice within the art and would be well understood by one skilled in the art to be two distinct and unrelated hybrid maize seeds. In addition, as provided in 37 C.F.R. §§ 1.801-1.809, Applicant wishes to reiterate they will refrain from deposit of Hybrid X1179J until allowable subject matter is indicated. Once deposit is completed Applicant will amend claims 1, 5 and 7 accordingly and this rejection will be moot. Therefore, Applicant submits this terminology is not indefinite and reconsideration is respectfully requested.

IV. Claim Rejections-35 USC §112

Claims 1-32 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that the recitation "X1179J" or X1179J (commercial designation) in claims 1, 5, 7, 11, 15, 19, 24, 28, and 32 render the claims and those dependent thereon indefinite. Further, the name X1179J does not clearly identify the claimed seeds, plants, or plant parts, and does not set forth the metes and bounds of the claimed invention. The missing ATCC accession number in claims 1, 5, and 7 also render the claims indefinite, as the claims do not clearly identify the deposit seed. The Examiner states that amending claims 1, 5, and 7 to recite the ATCC deposit number in which hybrid maize seed X1179J has been deposited would overcome this rejection.

Applicants traverse this rejection. Applicants respectfully submit that the actual ATCC deposit will be delayed until the receipt of notice that the application is otherwise in condition for allowance. As provided in 37 C.F.R. §§ 1.801-1.809, Applicants wish to reiterate they will refrain from deposit of hybrid X1179J until allowable subject matter is indicated. Once such notice is received, an ATCC deposit will be made, and the specification will be amended to contain the accession number of the deposit, the date of the deposit, a description of the deposited biological material sufficient to specifically identify it and to permit examination and the name and address of the depository. The claims (1, 5, and 7) will also be amended to recite the ATCC deposit number. In addition, Applicants submit that at least 2,500 seeds of Variety X1179J will be deposited with the ATCC. In view of this assurance, the rejection under 35 U.S.C. § 112, first paragraph, should be removed (MPEP § 2411.02). Such action is respectfully requested.

Claims 11, 15, 19, 24, 28, and 32 were rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that the terms "high," "excellent," "above average," "suited", and "late season" are relative terms that have no definite meaning. The terms do not reasonably apprise one of the scope of the invention.

Applicant respectfully traverses this rejection. Each of these claims recites two requirements, first that X1179J be an ancestor of the plant and second, that the claimed plant be "capable of expressing a combination of at least two X1179J traits" selected from a Markush grouping. Applicant notes that the Markush listing is directed to "X1179J" traits. Thus, Applicant submits that the recitation of X1179J traits clearly delineates the traits listed as those which are from X1179J or ancestors thereof. The recitation of "X1179J" in front of the term traits clearly indicates that the traits must be originating from X1179J. This is particularly so since the claim also requires that the plant X1179J must be an ancestor of the claimed plant. Applicant further submits that the adjectives used within the claims are not unduly narrative or imprecise as they do clearly characterize and positively recite the degree of expression of the particular traits within the application in Tables 1-4 (pages 18-31). This terminology is well known in the art and commonly used within breeding techniques of hybrid plants. In addition, Applicant asserts it is exactly clear what states or geographic areas define these regions and would be understood to one skilled in the art. Applicant respectfully submits that this language is not indefinite and would be understood by one in the art and is the terminology of use within the art. Therefore, Applicant respectfully requests reconsideration.

Furthermore, in Georgia-Pacific, the Federal Circuit stated that "...the policy of the patent statue contemplates granting protection to valid inventions, and this policy would be defeated if protection were to be accorded only to those patents which were capable of precise definition." Georgia-Pacific Corp. v. U.S. Plywood Corp., 258 F.2d 124, 136, 118 USPQ 122 (2d Cir.), cert. denied, 358 US 884 (1958). While some decisions have advocated the general statement that "[a]n invention must be capable of accurate definition, and it must be accurately defined, to be patentable" (See United Carbon Co. v. Binney & Smith Co., 1942, 317 US 228, 237, 63 S.Ct. 165, 170, 87 L.Ed. 232), the Federal Court has stated that "such general statements, however, must be viewed in the context of circumstances. Objectionable indefiniteness must be determined by the facts in each case, not by reference to an abstract rule." Georgia-Pacific at

136. "Patentable inventions cannot always be described in terms of exact measurements, symbols and formulae, and the applicant necessarily must use the meager tools provided by language, tools which admittedly lack exactitude and precision. If the claims read in light of the specifications, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more." Id. (See North Am. Vaccine, Inc. v. American Cyanamid Co., 7 F.3d 1571, 28 USPQ 2d 1333, 1339 (Fed. Cir. 1993)).

Moreover, it is against the policy of the patent statutes to bar patent protection for inventions that are incapable of precise definition. Georgia-Pacific Corp. v. U.S. Plywood Corp., 258 F. 2d 124, 118 USPQ 122 (2d Cir.), cert. denied, 358 US 884 (1958). With respect to the above-mentioned terms, the claims are as precise as the subject matter of the invention permits. All the variables recited in the claims are within a defined set of limits. For example, each of the variables, harvestable yield for its maturity(p. 13), resistance to Anthracnose Stalk Rot (p. 8), late season stalk lodging resistance (p. 14), tolerance to Corn Lethal Necrosis (p. 8), tolerance to Southern Leaf Blight (p. 19), and resistance to Fusarium Ear Mold (p.10) are all variables within a defined limit. First, these terms are defined in the specification. A patentee may be his or her own lexicographer. Finnigan Corp. v. Int'l Trade Comm'n, 180 F.3d 1354, 1364, 51 USPQ2d 1001 (Fed. Cir. 1999). This especially true when the patent deals with complicated technologies. Secondly, these variables have been defined with a set limit. For example, for resistance to Corn Lethal Necrosis on page 8 of the specification, the Applicants state "a 1 to 9 visual rating indicating the resistance to Corn Lethal Necrosis. A high score indicates a higher resistance." Thus Applicants have given a defined limit. It is within this limit that there are "infinite permutations" of the variables which preclude the Applicants from giving a more definite statement to these limitations.

Thus, because of the nature of the invention and the nature of the variable involved, one is unable to give an objective quantification. Moreover, terminology such as "suited" is well known in the art and commonly used within breeding techniques of hybrid plants. Applicant's request Examiner to withdraw his rejection.

The Examiner states further that the recitation "Southeast, Southcentral, Southwest, and Western regions of the United States" also render the claims indefinite. The Examiner asserts that it is not exactly clear what states or geographic areas make up this region.

Applicants have amended the claims by reciting the states that make up these geographic regions, thus alleviating this rejection.

Claims 10, 14, 18, 23, 27, and 31 are indefinite for improper antecedent basis. The Examiner states the claims indicate they are directed to the corn plant breeding program of claims 9, 13, 17, 22, 26, and 30, respectively. However, claims 9, 13, 17, 22, 26, and 30 are directed to methods, not programs. The Examiners suggests that the recitation "corn plant breeding program" in line 1 of claims The claims 10, 14, 18, 23, 27, and 31 be replaced with --method--.

Applicants have amended the claims in accordance to Examiner's suggestion by changing the recitation "corn plant breeding program" in line 1 of claims 10, 14, 18, 23, 27 and 31 with --method--, thus alleviating this rejection.

V. Claim Rejections-35 U.S.C. § 112

Claims 8, 11, 12-19, 21, 24-32 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner asserts that the specification does not describe X1179J as being male sterile. The specification discusses how plants may be manipulated to be male sterile, however, the morphological and physiological description of plant X1179J described in the specification does not indicate that it is male sterile.

Applicants have amended claims 8 and 21 by adding the recitation --has been manipulated to be male sterile--, thus alleviating this rejection. Support can be found on page 13 of the specification, between the definitions for POL WT and POP K/A wherein it states "[i]t should be understood that the inbred can, through routine manipulation of cytoplasmic or other factors, be produced in a male-sterile form. Such embodiments are also contemplated within the scope of the present claims."

The Examiner further asserts the specification does not describe the plants developed by the maize breeding programs, transgenic X1179J plants, X1179J plants further comprising genes transferred by backcrossing, or maize plants wherein at least one ancestor is corn variety X1179J and which expresses at least two of the traits listed in claims 11, 15, 19, 24, 28, or 32. The

morphological and physiological traits of the corn plants that are crossed with X1179J, and with progeny of that cross are unknown, and the description of progeny and descendants of corn plant X1179J are unknown. The Examiner further asserts that the description of corn plant X1179J is not indicative of any of its descendants. To say that a plant expresses two traits of another plant is not sufficient information to describe that plant, as numerous plants express at least two of the same traits as those expressed by X1179J. Two plant traits do not provide any description of the other traits of a plant. It is possible that the claimed plants inherited the genes governing those traits from an ancestor other than plant X1179J.

Applicant has amended claims 11, 15, 19, 24, 28 and 32 by adding the threshold, having 50% of the ancestral alleles, that limits the variation permitted among the genus, as well as an assayable function, capable of expressing at least a combination of two traits of X1179J. There is literal support for the amended claims found in the specification on page 3 and beginning on page 32 of the instant specification. Plant breeding techniques known in the art and used in the maize plant breeding program include, but are not limited to the following: recurrent selection backcrossing, pedigreed breeding, restriction length polymorphism enhanced selection, genetic marker enhanced selection and transformation. With the amendments to the above state claims, Applicants have identified a transgenic X1179J plant (claim 12), X1179J plant further comprising genes transferred by backcrossing (claim 19), or a maize plant wherein at least one ancestor is corn variety X1179J (claim 33) by defining a particular threshold that limits variation and reciting a functional test to identify such plants. In addition, Applicant has drafted new claims 33-43 which Applicant believes come within the purview of the written description requirement and do not add new matter. Under the written description requirement, Applicant should be allowed to claim the progeny of a cross of maize plants crossed with X1179J with phenotypic characteristics since distinguishing identifying characteristics in the chemical and biotechnological arts, dealing with DNA, are those such as: partial structure, physical and/or chemical properties, functional characteristics, known or disclosed correlation between structure and function, method of making, and combinations of the above. In plants, these identifying characteristics are those detectable in the phenotype which are manifested through gene expression. Claims to a particular species of invention are adequately described if the disclosure of relevant identifying characteristics are present in the application. Again, one of ordinary skill in the art is reasonably apprised in knowing that a plant crossed with X1179J will result in a

plant having half of the genetic contribution of X1179J. A further limitation set by Applicant is that the plants must be capable of expressing a combination of at least two phenotypic characteristics of X1179J.

Further, Applicant asserts the specification supplies an extensive definition and description of 'transgene' and transgenes of interest. (See generally pages 32-37 and pages 38-42 for an extensive list of potential transgenes.) Applicant also notes, a person having skill in the art could insert a DNA gene into a selected maize plant. The Examiner also states that the insertion of a single copy of a gene into a plant would produce a plant that is indistinguishable from its non-transformed plant. Applicant has defined transgenes in the present application in the paragraph that spans pages 32-33 as follows:

> With the advent of molecular biological techniques that have allowed the isolation and characterization of genes that encode specific protein products, scientists in the field of plant biology developed a strong interest in *engineering the genome of plants to contain and express foreign genes, or additional genes* (perhaps driven by different promoters) in order to alter the traits of a plant in a specific manner. *Such foreign, additional and/or modified genes are referred to herein collectively as "transgenes"*. Over the last fifteen to twenty years several methods for producing transgenic plants have been developed, and *the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid X1179J.*

The present application clearly describes and defines a transgene to be a gene transferred into a plant wherein the product of that gene is expressed. This expression will confer a new or improved trait into that plant. However, this gene is but a tiny fraction of the entire genome. In other words, the plant of claim 12 is distinguishable from the prior art plants just as is hybrid X1179J without the transgenes. Further, the plant of claim 12 also contains a trait(s) that is either improved or additional to the traits of the maize plant of claim 2. The X1179J-transgene plant still expresses the unique combination of traits of X1179J without the transgenes with the exception of the traits expressed by the transgenes. The trivial modifications introduced by the transgenes to the unique invention of X1179J are clearly supported and described in the present application.

In light of the above remarks, Applicant respectfully requests reconsideration and withdrawal of the rejections to claims 8, 11, 12-19, 21 and 24-32 under 35 U.S.C. § 112, first paragraph.

Claims 1-32 were rejected under 35 USC 112, first paragraph, as containing subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Examiner states the claims are broadly drawn. Since the claimed seed of maize hybrid line X1179J is essential to the claimed invention, it must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. The Examiner further states that if the seed is not so obtainable or available, a deposit thereof may satisfy the requirements of 35 USC 112. The specification does not disclose a repeatable process to obtain the exact same seed in each occurrence and it is not apparent if such a seed is readily available to the public. towards hybrid maize seed designated X1179J. The Examiner further states that if the seeds are deposited under the terms of the Budapest Treaty, then an affidavit or declaration by the Applicants, or a statement by an attorney of record over his/her signature and registration number, stating that the seed will be irrevocably and without restriction or condition released to the public upon the issuance of a patent would satisfy the deposit requirement made herein.

Applicants respectfully traverse this rejection and reiterate the following. The actual ATCC deposit will be delayed until the receipt of notice that the application is otherwise in condition for allowance. Once such notice is received, an ATCC deposit will be made, and the specification will be amended to contain the accession number of the deposit, the date of the deposit, a description of the deposited biological material sufficient to specifically identify it and to permit examination and the name and address of the depository. The claims will also be amended to recite the ATCC deposit number. In addition, Applicant submits that at least 2,500 seeds of Hybrid X1179J will be deposited with the ATCC.

VI. Issues Under 35 U.S.C. § 102/103

Claims 1-32 were rejected under 35 U.S.C. § 102(c) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Morrow (U.S. Patent 6,118,052). The Examiner states the claims are broadly drawn towards the instant claims. Applicants traverse this rejection. The Applicants would like to point out that X1179J and 31A12 are not the same inventions; moreover, are their differences minor morphological variations. Applicants submit that the claimed plant cannot be rendered obvious or lacking novelty as it possesses a unique combination of traits which confers a unique combination of genetics. Moreover, Applicant claims a method of making a plant which did not previously exist. Pursuant to the recent Federal Circuit decision, Elan Pharmaceuticals, Inc. v. Mayo Foundation for Medical Education & Research, No. 00-1467 (Fed. Cir. Aug. 30, 2002), "a novel patented product is not "anticipated" if it did not previously exist." Id. This is the case whether or not the process for making the new product is generally known. Id. The invention X1179J has not previously existed as it is the result of the crossing the two maize inbred lines GE534640 and GE567914.

Furthermore, when looking at the tables of both inventions, hybrids created using X1179J as one of the parents are clearly not anticipated by hybrids made using 31A12 as one of the parents.

The inventions X1179J and 31A12 differ for various traits that are not minor. For example, Table 2C (p. 26) of the instant specification shows that hybrid X1179J is higher yielding grain at harvest in bushels per acre than hybrid 31A12; hybrid X1179J also exhibits taller plant stature with significantly higher ear placement than 31A12; hybrid X1179J exhibits superior stalk lodging resistance; hybrid X1179J exhibits significantly better resistance to Anthracnose Stalk Rot and Corn Lethal Necrosis than hybrid 31A12.

The aforementioned examples all illustrate that there are large differences between X1179J and 31A12. The examples listed are not exhaustive but they do give ample evidence that the inventions are not the same. Furthermore, when looking at the tables of both inventions, hybrids created using X1179J as one of the parents are clearly not anticipated by hybrids made using 31A12 as one of the parents.

Applicants further submit that the claims do not simply recite traits, but instead recites these specific traits only to the extent that they are "X1179J" traits; thereby being derived from

the seed/germplasm of X1179J. When looking at maize plants it would be possible for one ordinarily skilled in the art to find many traits that are similar between varieties such as the disease resistance or growth habit. Note, variety with respect to agricultural variety, can be defined as a group of similar plants that by structural features and performance can be identified from other varieties within the same species. Moreover, the claims also recites that the claimed plant must have X1179J as an ancestor further indicating that these traits were derived from the X1179J plant.

In response to the Examiner's contention that one could not distinguish the claimed plant from the prior art which shows each of these traits, Applicants submit that one can easily tell by reference to the plants breeding history, which can be confirmed by its molecular profile, whether the plant did indeed have plant X1179J as an ancestor and expressed two or more "X1179J" traits. Further, any phenotypic trait that is expressed is the result of the genetic material present in the plant, and X1179J will have its own unique genetic background that will give rise to the claimed plant and this profile along with its combination with other plants will result in a unique combined genetic profile that is the product claimed.

Further, there is no expectation of success that the crossing of the hybrid X1179J with some yet to be identified plant would yield a plant with two of the traits enumerated in the claimed invention because that particular plant did not begin with the claimed seed X1179J which is essential. Without any teaching about dominance, or heritability of such traits it cannot be said that there is an expectation of success that the combination of plants would achieve the combination enumerated in the claimed invention, to say nothing of issues such as inbreeding depression etc. Applicants assert that it is not the phenotypic characteristics alone that are claimed and taught in the instant invention. It is a combination of physiological and morphological characteristics, as claimed, which make the present hybrid non-obvious and not anticipated over Morrow. Further, In re Thorpe, states that "a product by process claim may be properly rejected over prior art teaching the same product produced by a different process", as noted by the Examiner. 227 U.S.P.Q. 964, 966 (Fed. Cir. 1985). However, Applicants submit that this is not the same product physiologically or morphologically as the cited prior art as can be evidenced by one skilled in the art through analysis of the data tables in each. In addition, it is impermissible to use hindsight reconstruction and the benefit of Applicant's disclosure to pick among pieces which are present in the art, there must be some suggestion to make the

combination and an expectation of success. In re Vaeck, 20 U.S.P.Q.2d 1434 (Fed. Cir. 1991). Thus, the present application deserves to be considered new and non-obvious compositions in their own right as products of crossing when X1179J is used as a starting material.

In light of the above, Applicants respectfully request the Examiner reconsider and withdraw the rejection to claims 11, 15, 19, 24, 28 and 32 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Morrow (U.S. Patent 6,046,387).

VII. Issues Under 35 U.S.C. § 103

Claims 1-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Morrow (U.S. Patent 6,118,052). The Examiner states the claimed invention was prima facie obvious as a whole to one of ordinary skill in the art at the time it was made, if not anticipated by Morrow.

Applicants traverse. When looking at a maize plant it would be possible to find many traits that are similar between varieties such as the color of flowers or growth habit. However, to say there are similarities in phenotype between two varieties is not the same as saying that the two varieties have the same morphological and physiological characteristics as a whole, or that one is an obvious variant of the other. Further, similarity in phenotype does not mean that the two varieties will perform similarly, particularly in a breeding program. As stated above, variety with respect to agricultural variety may be defined as a group of similar plants that by structural features and performance can be identified from other varieties within the same species

Applicants submit that hybrid X1179J does not exhibit the same characteristics as 31A12. It must be recognized that the hybrids provided by this invention are themselves unusual and unobvious results of a common process, in that they provide the unique combination of outstanding yield, superior resistance to Anthracnose Stalk Rot, and superior tolerance to Corn Lethal Necrosis. Thus, hybrid X1179J deserves to be considered as a new and non-obvious composition in its own right as does its tissue culture as products of the process when X1179J is used as starting material. Applicants point out that X1179J is a unique plant hybrid which never before existed until Applicants filed the application and until its deposit of the same. While Morrow does teach the general regeneration of maize plants from tissue culture techniques, it does not teach or suggest the use of the unique maize hybrid X1179J. As will be demonstrated

below, several morphological and physiological characteristics of hybrid X1179J are either different from or not present in 31A12.

Differences between the two varieties are summarized in the table below:

| CHARACTERISTICS | X1179J | 31A12 |
|---|---|---|
| Plant:<br>Anthocyanin of Brace Root | Very dark | Faint |
| Leaf:<br>Degrees Leaf Angle | 0.172 | 0.375 |
| Ear:<br>Fresh Husk Color | Dark green | Medium green |
| Position of ear at dry husk stage<br>Row Alignment | Upright<br>Slightly curved | Horizontal<br>Straight |
| Kernel:<br>% Round Kernels<br>Tassel length (cm) | 56<br>56.5 | 28<br>62.8 |
| Insect Resistance:<br>European Corn Borer (Ostrinia nubilalis) | 5, where 1=most susceptible and 9=most resistant | No teaching |
| Agronomic traits:<br>Post-anthesis Root Lodging | 7.4 | 12.6 |

This comparison clearly shows that 31A12 does not exhibit the characteristics of hybrid X1179J. In addition, the present specification clearly shows in Table 4 at p. 30-31 that hybrid X1179J demonstrates a unique combination of outstanding yield, superior resistance to Anthracnose stalk rot, and superior tolerance to Corn Lethal Necrosis

In light of the above, Applicants respectfully request the Examiner reconsider and withdraw the rejection to claims 1-32 under 35 U.S.C. § 103(a).

VIII. Conclusion

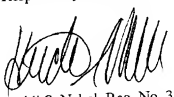
In conclusion, Applicants submit in light of the above amendments and remarks, the claims as amended are in a condition for allowance, and reconsideration is respectfully requested.

No additional fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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Application No. 09/759,703

## AMENDMENT — VERSION WITH MARKINGS TO SHOW CHANGES MADE

### In the Specification

The paragraph beginning at page 26, line 32 has been amended as follows:

With the advent of molecular biological techniques that have allowed the isolation and characterization of genes that encode specific protein products, scientists in the field of plant biology developed a strong interest in engineering the genome of plants to contain and express foreign genes, or additional, or [modifed] modified versions of native or endogenous genes (perhaps driven by different promoters) in order to alter the traits of a plant in a specific manner. Such foreign, additional and/or modified genes are referred to herein collectively as "transgenes". Over the last fifteen to twenty years several methods for producing transgenic plants have been developed, and the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid maize line X1179J.

### In the Claims

Please amend the following claims:

6. (Amended)

[A] The tissue culture according to claim 5, the cells or protoplasts being from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

8. (Amended)

The maize plant of claim 2 wherein said plant has been manipulated to be [is] male sterile.

10. (Amended)

The [maize plant breeding program] method of claim 9 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding,

restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

11. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 2, wherein said maize plant has derived at least 50% of its ancestral alleles from X1179J and is capable of expressing a combination of at least two X1179J [(commercial designation)] traits selected from the group consisting of: high harvestable yield for its maturity, excellent resistance to Anthracnose Stalk Rot, above average late season stalk lodging resistance, above average tolerance to Corn Lethal Necrosis, above average tolerance to Southern Leaf Blight, above average resistance to Fusarium Ear Mold, [suited] favorable to [the Southeast, Southcentral, Southwest, and Western regions of the United States,] North Carolina, South Carolina, Georgia, Florida, Alabama, Missouri, Tennessee, Kentucky, Arkansas, Texas, Oklahoma, New Mexico, Arizona, Nebraska, Kansas, Colorado, and California, and a relative maturity of approximately 117 based on the Comparative Relative Maturity Rating System for harvest moisture of grain wherein a sample of a maize variety X1179J was deposited under ATCC Accession Number _____.

12. (Amended)

[A] The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more transgenes.

14. (Amended)

The [maize plant breeding program] method of claim 13 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

15. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 12, wherein said maize plant has derived at least 50% of its ancestral

alleles from X1179J and is capable of expressing a combination of at least two X1179J [(commercial designation)] traits selected from the group consisting of: high harvestable yield for its maturity, excellent resistance to Anthracnose Stalk Rot, above average late season stalk lodging resistance, above average tolerance to Corn Lethal Necrosis, above average tolerance to Southern Leaf Blight, above average resistance to Fusarium Ear Mold, [suited] favorable to [the Southeast, Southcentral, Southwest, and Western regions of the United States] North Carolina, South Carolina, Georgia, Florida, Alabama, Missouri, Tennessee, Kentucky, Arkansas, Texas, Oklahoma, New Mexico, Arizona, Nebraska, Kansas, Colorado, and California, and a relative maturity of approximately 117 based on the Comparative Relative Maturity Rating System for harvest moisture of grain wherein a sample of a maize variety X1179J was deposited under ATCC Accession Number _____.

16. (Amended)

[A] The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

18. (Amended)

The [maize plant breeding program] method of claim 17 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

19. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 16, wherein said maize plant has derived at least 50% of its ancestral alleles from X1179J and is capable of expressing a combination of at least two X1179J [(commercial designation)] traits selected from the group consisting of: high harvestable yield for its maturity, excellent resistance to Anthracnose Stalk Rot, above average late season stalk lodging resistance, above average tolerance to Corn Lethal Necrosis, above average tolerance to Southern Leaf Blight, above average resistance to Fusarium Ear

Mold, [suited] favorable to [the Southeast, Southcentral, Southwest, and Western regions of the United States] North Carolina, South Carolina, Georgia, Florida, Alabama, Missouri, Tennessee, Kentucky, Arkansas, Texas, Oklahoma, New Mexico, Arizona, Nebraska, Kansas, Colorado, and California, and a relative maturity of approximately 117 based on the Comparative Relative Maturity Rating System for harvest moisture of grain wherein a sample of a maize variety X1179J was deposited under ATCC Accession Number_____.

21. (Amended)

The maize plant of claim 20 wherein said maize plant has been manipulated to be [is] male sterile.

23 (Amended)

The [maize plant breeding program] method of claim 22 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhance selection, and transformation.

24. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 20, wherein said maize plant has derived at least 50% of its ancestral alleles from X1179J and is capable of expressing a combination of at least two X1179J [(commercial designation)] traits selected from the group consisting of: high harvestable yield for its maturity, excellent resistance to Anthracnose Stalk Rot, above average late season stalk lodging resistance, above average tolerance to Corn Lethal Necrosis, above average tolerance to Southern Leaf Blight, above average resistance to Fusarium Ear Mold, [suited] favorable to [the Southeast, Southcentral, Southwest, and Western regions of the United States] North Carolina, South Carolina, Georgia, Florida, Alabama, Missouri, Tennessee, Kentucky, Arkansas, Texas, Oklahoma, New Mexico, Arizona, Nebraska, Kansas, Colorado, and California, and a relative maturity of approximately 117 based on the Comparative Relative Maturity Rating System for harvest moisture of grain

wherein a sample of a maize variety X1179J was deposited under ATCC Accession Number _____.

25. (Amended)

[A] The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more transgenes.

27 (Amended)

The [maize plant breeding program] method of claim 26 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

28. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 25, wherein said maize plant has derived at least 50% of its ancestral alleles from X1179J and is capable of expressing a combination of at least two X1179J [(commercial designation)] traits selected from the group consisting of: high harvestable yield for its maturity, excellent resistance to Anthracnose Stalk Rot, above average late season stalk lodging resistance, above average tolerance to Corn Lethal Necrosis, above average tolerance to Southern Leaf Blight, above average resistance to Fusarium Ear Mold, [suited] favorable to [the Southeast, Southcentral, Southwest, and Western regions of the United States] North Carolina, South Carolina, Georgia, Florida, Alabama, Missouri, Tennessee, Kentucky, Arkansas, Texas, Oklahoma, New Mexico, Arizona, Nebraska, Kansas, Colorado, and California, and a relative maturity of approximately 117 based on the Comparative Relative Maturity Rating System for harvest moisture of grain wherein a sample of a maize variety X1179J was deposited under ATCC Accession Number _____.

29. (Amended)

[A] The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

31. (Amended)

The [maize plant breeding program] method of claim 30 wherein the plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

32. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 29, wherein said maize plant has derived at least 50% of its ancestral alleles from X1179J and is capable of expressing a combination of at least two X1179J [(commercial designation)] traits selected from the group consisting of: high harvestable yield for its maturity, excellent resistance to Anthracnose Stalk Rot, above average late season stalk lodging resistance, above average late season stalk lodging resistance, above average tolerance to Corn Lethal Necrosis, above average tolerance to Southern Leaf Blight, above average resistance to Fusarium Ear Mold, [suited] favorable to [the Southeast, Southcentral, Southwest, and Western regions of the United States] North Carolina, South Carolina, Georgia, Florida, Alabama, Missouri, Tennessee, Kentucky, Arkansas, Texas, Oklahoma, New Mexico, Arizona, Nebraska, Kansas, Colorado, and California, and a relative maturity of approximately 117 based on the Comparative Relative Maturity Rating System for harvest moisture of grain wherein a sample of a maize variety X1179J was deposited under ATCC Accession Number _____.

Please add new claims 33 – 41 as follows:

33. (New)

A method of making a hybrid maize plant designated X1179J comprising:

crossing an inbred maize plant GE534640, deposited as _____ with a second inbred maize plant GE567914, deposited as _____; and

developing from the cross a hybrid maize plant representative seed of which having been deposited under ATCC Accession Number _____.

34. (New)

A method of making an inbred plant comprising:

obtaining a hybrid maize plant of claim 2 and

applying double haploid methods to obtain a plant that is homozygous at essentially every locus, said plant having received all of its alleles from maize hybrid plant X1179J.

35. (New)

A method for producing an X1179J progeny maize plant comprising:

(c) growing the plant of claim 2, and obtaining self or sib pollinated seed therefrom; and

(d) producing successive filial generations to obtain an X1179J progeny maize plant.

36. (New)

A maize plant produced by the method of claim 35, said maize plant having received all of its alleles from hybrid maize plant X1179J.

37. (New)

The maize plant of claim 36 wherein said maize plant comprises 2 or more X1179J characteristics described in Table 1 or 2.

38. (New)

A method for producing a population of X1179J progeny maize plants comprising:

(a) obtaining a first generation progeny maize seed produced by crossing the maize plant of claim 2 with a second maize plant;

(b) growing said first generation progeny maize seed to produce $F_1$ generation maize plants and obtaining self-pollinated seed from said $F_1$ generation maize plants; and

(c) repeating the steps of growing and harvesting successive filial generations to obtain a population of X1179J progeny maize plants.

39. (New)

The population of X1179J progeny maize plants produced by the method of claim 38, said population, on average, deriving at least 50% of its ancestral alleles from X1179J.

40. (New)

A X1179J maize plant selected from the population of X1179J progeny maize plants produced by the method of claim 38, said maize plant deriving at least 50% of its ancestral alleles from X1179J.

41. (New)

The method of claim 38, further comprising applying double haploid methods to said $F_1$ generation maize plant or to a successive filial generation thereof.

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## AMENDMENT — VERSION WITH MARKINGS TO SHOW CHANGES MADE

### In the Specification

The paragraph beginning at page 26, line 32 has been amended as follows:

With the advent of molecular biological techniques that have allowed the isolation and characterization of genes that encode specific protein products, scientists in the field of plant biology developed a strong interest in engineering the genome of plants to contain and express foreign genes, or additional, or [modifed] modified versions of native or endogenous genes (perhaps driven by different promoters) in order to alter the traits of a plant in a specific manner. Such foreign, additional and/or modified genes are referred to herein collectively as "transgenes". Over the last fifteen to twenty years several methods for producing transgenic plants have been developed, and the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid maize line X1179J.

### In the Claims

Please amend the following claims:

6. (Amended)
[A] The tissue culture according to claim 5, the cells or protoplasts being from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

8. (Amended)
The maize plant of claim 2 wherein said plant has been manipulated to be [is] male sterile.

10. (Amended)
The [maize plant breeding program] method of claim 9 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding,